

responses have been consolidated into key issues in this section.

### Issue 1: Polar Bear Population Decline

*Comment 1:* Current polar bear populations are stable or increasing and the polar bear occupies its entire historical range. As such, the polar bear is not in imminent danger of extinction and, therefore, should not be listed under the Act.

*Our response:* We agree that polar bears presently occupy their available range and that some polar bear populations are stable or increasing. As discussed in the “Current Population Status and Trend” section of the rule, two polar bear populations are designated by the PBSG as increasing (Viscount Melville Sound and M’Clintock Channel); six populations are stable (Northern Beaufort Sea, Southern Hudson Bay, Davis Strait, Lancaster Sound, Gulf of Bothia, Foxe Basin); five populations are declining (Southern Beaufort Sea, Norwegian Bay, Western Hudson Bay, Kane Basin, Baffin Bay), and six populations are designated as data deficient (Barents Sea, Kara Sea, Laptev Sea, Chukchi Sea, Arctic Basin, East Greenland) with no estimate of trend (Aars et al. 2006). The two populations with the most extensive time series of data, Western Hudson Bay and Southern Beaufort Sea, are considered to be declining. The two increasing populations (Viscount Melville Sound and M’Clintock Channel) were severely reduced in the past as a result of overharvest and are now recovering as a result of coordinated international efforts and harvest management.

The current status must be placed in perspective, however, as many populations were declining prior to 1973 due to severe overharvest. In the past, polar bears were harvested extensively throughout their range for the economic or trophy value of their pelts. In response to the population declines, five Arctic nations (Canada, Denmark on behalf of Greenland, Norway, Union of Soviet Socialist Republics, and the United States), recognized the polar bear as a significant resource and adopted an inter-governmental approach for the protection and conservation of the species and its habitat, the 1973 Agreement on the Conservation of Polar Bears (1973 Agreement). This agreement limited the use of polar bears for specific purposes, instructed the Parties to manage populations in accordance with sound conservation practices based on the best available scientific data, and called the range States to take appropriate action to protect the

ecosystems upon which polar bears depend. In addition, Russia banned harvest in 1956, harvest quotas were established in Canada in 1968, and Norway banned hunting in 1973. With the passage of the MMPA in 1972, the United States banned sport hunting of polar bears and limited the hunt to Native people for subsistence purposes. As a result of these coordinated international efforts and harvest management leading to a reduction in harvest, polar bear numbers in some previously-depressed populations have grown during the past 30 years.

We have determined that listing the polar bear as a threatened species under the Act is appropriate, based on our evaluation of the actual and projected effects of the five listing factors on the species and its habitat. While polar bears are currently distributed throughout their range, the best available scientific information, including new USGS studies relating status and trends to loss of sea ice habitat (Durner et al. 2007; Amstrup et al. 2007), indicates that the polar bear is not currently in danger of extinction throughout all or a significant portion of their range, but are likely to become so within the 45-year “foreseeable future” that has been established for this rule. This satisfies the definition of a threatened species under the Act; consequently listing the species as threatened is appropriate. For additional information on factors affecting, or projected to affect, polar bears, please see the “Summary of Factors Affecting the Polar Bear” section of this final rule.

*Comment 2:* The perceived status of the Western Hudson Bay population is disputed because data are unreliable, earlier population estimates cannot be compared to current estimates, and factors other than climate change could contribute to declines in the Western Hudson Bay population.

*Our response:* The Western Hudson Bay population is the most extensively studied polar bear population in the world. Long-term demographic and vital rate (e.g., survival and recruitment) data on this population exceed those available for any other polar bear population. Regehr et al. (2007a) used the most advanced analysis methods available to conduct population analyses of the Western Hudson Bay population. Trend data demonstrate a statistically-significant population decline over time with a substantial level of precision. The authors attributed the population decline to increased natural mortality associated with earlier sea ice breakup and to the continued harvest of approximately 40 polar bears per year. Other factors such

as the effects of research, tourism harassment, density dependence, or shifts in distribution were not demonstrated to impact this population. Regehr et al. (2007a) indicated that overharvest did not cause the population decline; however, as the population declined, harvest rates could have contributed to further depressing the population. Additional information has been included in the “Western Hudson Bay” section of this final rule that provides additional details on these points.

*Comment 3:* The apparent decline in the Southern Beaufort Sea population is not significantly different from the previous population estimate.

*Our response:* The Southern Beaufort Sea and Western Hudson Bay populations are the two most studied polar bear populations. Regehr et al. (2006) found no statistically significant difference between the most recent and earlier population estimates for the Southern Beaufort Sea population due to the large confidence interval for the earlier population estimate, which caused the confidence intervals for both estimates to overlap. However, we note that the Southern Beaufort Sea population has already experienced decreases in cub survival, significant decreases in body weights for adult males, and reduced skull measurements (Regehr et al. 2006; Rode et al. 2007). Similar changes were documented in the Western Hudson Bay population before a statistically significant decline in that population was documented (Regehr et al. 2007a). The status of the Southern Beaufort Sea population was determined to be declining on the basis of declines in vital rates, reductions in polar bear habitat in this area, and declines in polar bear condition, factors noted by both the Canadian Polar Bear Technical Committee (PBTC 2007) and the IUCN Polar Bear Specialist Group (Aars et al. 2006).

*Comment 4:* Population information from den surveys of the Chukchi Sea polar bear population is not sufficiently reliable to provide population estimates.

*Our response:* We recognize that the population estimates from previous den and aerial surveys of the Chukchi Sea population (Chelintsev 1977; Derocher et al. 1998; Stishov 1991a, b; Stishov et al. 1991) are quite dated and have such wide confidence intervals that they are of limited value in determining population levels or trends for management purposes. What the best available information indicates is that, while the status of the Chukchi Sea population is thought to have increased following a reduction of hunting pressure in the United States, this